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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,349

03/03/2005

Kazuko Itabashi

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EXAMINER

TAI, XIUYU

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,349	<b>Applicant(s)</b> ITABASHI, KAZUKO	
	<b>Examiner</b> Xiuyu Tai	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/3/2005</u> .                                                | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “at least one of mineral or ceramic, or sludge of mineral or ceramic or metal is held between the two or more types of metals” as cited in claims 3 and 4 and “a reflecting member disposed on at least one surface of the stacked member” as cited in claims 7-9 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. As cited in claim 2, “ at least one of the two types of metals is grained” constitutes an indefinite subject matter because it is not clear what the applicant regards as “grained” and the instant specification does not provide clear definition of this term. Therefore, appropriate clarification is required. For the purpose of examination, “grained metal” is interpreted as metal that contains grains or crystal grains.

5. Claim 5 recites the limitation “the stacked member” in line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Sato et al (U.S. 5,738,931).

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8. Regarding claim 1, Sato et al disclose a magnetic device. The magnetic device comprises a coil 44 having a main conductor made of Cu and an underlying conductor made of at least one material selected from the group consisting of Ti, Ta, Mo, Cr, Nb, and W and their alloy (claim 8; Figure 8A; col. 9, line 60-63; col. 4, line 7-8 & 15-18) and the main conductor 3 is stacked on the underlying conductor 2 (Figure 2; col. 4, line 5-7). The magnetic device of Sato is fully capable of performing the claimed functions.

9. Regarding claim 2, the reference teaches that Cu as the main conductor 3 is formed into a thin film by vacuum deposition or sputter method (col. 5, line 14-16), implying that the main conductor made of Cu contains crystal grains of Cu, which reads on the instant claim.

10. Regarding claim 5, the main conductor 3 and the underlying conductor 2 are in the shape of plate/sheet, reads on the instant claim.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (U.S. 5,738,931) as applied to claim1 above, and further in view of Higa et al (U.S. 6,684,824).

14. Regarding claims 3 and 4, Sato fails to teach at least one of mineral or ceramic is held between the two or more type of metals. However, Higa et al disclose a liquid fuel reformer using magnets. The reformer comprises ceramic bodies 11 which are disposed between two magnets 10 (Figure 2; col. 4, line 57-60). The reference states that the combination of magnets 10 and ceramic bodies 11 is effective in achieving, peaking or at least permitting satisfactory operation of the reformer (col. 5, line 45-55). Therefore, it would be obvious for one having ordinary skill in the art to include at least one ceramic body as taught by Higa between the two metals of Sato in order to enhance/sustain the effectiveness of magnetic force generated in the device of Sato.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (U.S. 5,738,931) as applied to claim1 above.

16. Regarding claim 6, Sato does not disclose the main conductor 3 and the underlying conductor 2 having the shape of arch or tubular. However, one having ordinary skill in the art would have found obvious to utilize different shapes of metal conductors in order to accommodate the indented uses.

17. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (U.S. 5,738,931) as applied to claim 1 above, and further in view of Carman et al (U.S. 3,286,259)

18. Regarding claims 7-9, Sato fails to teach a reflecting member which reflects the electromagnetic wave. However, Carman et al discloses a reflector to reflect solar or electromagnetic wave. Heintz teaches a reflector 1 (Figure 1; col. 3, line 5) to reflect back electromagnetic waves (col. 1, line 9-10). The reference states that it is desirable to transmit signals originating from a common point and concentrate them at a common point, which can be accomplished by utilizing a reflector (col. 1, line 16-20). Therefore, it would be obvious for one having ordinary skill in the art to include an electromagnetic wave reflector as suggested by Carman into the device of Sato in order to concentrate electromagnetic wave generated from magnet device of Sato, hence enhancing the effectiveness of operation.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuyu Tai whose telephone number is 571-270-1855.

The examiner can normally be reached on Monday - Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. T./

Examiner, Art Unit 1795

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795

4/29/2008